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News Bulletin of The Entomological Society of Victoria Inc.

THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc)
MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

OBJECTIVES

The aims of the Society are:

(a) to stimulate the scientific study and discussion of all aspects of entomology,
(b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
(c) to compile a comprehensive list of all Victorian insect species,
(d) to bring together in a congenial but scientific atmosphere all persons interested in entomology.

MEETINGS

The Society's meetings are held at Clunies Ross House, National Science Centre, 191 Royal Parade, Parkville, Victoria, at 8 p.m. on the third Friday of even months, with the possible exception of the December meeting which may be held earlier. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

SUBSCRIPTIONS

Ordinary Member	$20.00
Country Member	$16.00 (Over 100 km from GPO Melbourne)
Student Member	$12.00
Associate Member	$ 5.00 (No News Bulletin)

No additional fee is payable for overseas posting by surface mail of the news bulletin. Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects are ordinary Members.

Cover design by Alan Hyman.

Cover illustration of *Ogyris* sp (♀) (Lake Douglas, nr Kalgoorlie, WA) by Jenny Browning.

MINUTES OF GENERAL MEETING, 15 OCTOBER 1993

The meeting was opened at 8.05 pm

Present: J. Burns, P. Carwardine, K. Clark, I. Endersby, A. Farnworth, C. Herd, P. Kelly, C. Meehan, D. Meehan, D. Stewart, N. Stewart, R. Vagi.
Visitors: P. Grey.

Apologies: D. Dobrosak, R. Field, D. & J Holmes, M. Malipatil, T. New.

Minutes: Minutes of the August meeting (*Vic. Ent.* 23(5) 89-93) were received and passed. (Stewart/Burns).

The speaker for the evening was Dr. Paul Horne whose topic was "Antarctic Invertebrates". Dr. Horne had surveyed the invertebrate fauna of the moss beds in the Vestfold Hills while stationed at the Davis Base in Antarctica. He also examined seals and antarctic birds or ectoparasites. His samples included two species of tardigrade, rotifers, nematodes and mites. A vote of thanks was moved by P. Kelly.

Correspondence: Detailed and received.

Treasurer's Report: Ian Endersby tabled his report inclusive to the 15 October 1993.

1. General Account

SBV Bank Account	$2802
Term Deposit due 24.11.97	$ 200
Total:	$3002

2. Le Souëf Award Account

SBV Bank Account	$ 414
Term Deposits due 14.06.95	$1400
24.11.97	$ 500
Total:	$2314

3. Junior Encouragement Fund

SBV Bank Account	$ 104
Term Deposit due 24.11.97	$ 300
Total:	$ 404

4. Membership

Country	63
Metropolitan	36
Student	2
Life	2
	103
Associate	5
	108
Subscribers	12

Non-financial members deleted under Rule 6(a)

D. Archibald	C. Muller
P. Fox	E. Nielsen
P. Gillespie	J. O'Dea
A. Glaister	M. Pucetti
T. Hawkeswood	A. Sundholm

The Treasurer also announced the results of the Science Talent Search Awards funded with a donation from the Society's Junior Encouragement Fund:

Experimental Research Section
Intermediate Division
Thiagarajan Premala: An investigation on circadian rhythms

Lower Primary Division
Pears Asher : Harlequin Bugs

Received (Endersby/Kelly)

Editor's Report: The editor requires additional articles for the December and February issues as well as contributions to Articles of Entomological Interest and Grapevine News.

Excursions: Peter Carwardine reported that the "The Pines Reserve" excursion will be held on Saturday 20th November and will include the Langwarrin Researve if time permits.

General Business: 1. Membership

Mr C. Meehan; Mr. D. Meehan were elected to membership. Nominations were received on behalf of:

Cleveland Douglas Herd (Malipatil/Hunting)
Garry Webb (Dobrosak/Carwardine)
Paul David Meehan (D. Meehan/C. Meehan)

In accordance with the Society's rules an election will be held at the next general meeting.

2. D. Stewart relayed a message from David Holmes that he had received visits from B. D'Abrera and Mick May.

Le Souëf Award The president presented a book on coleopteran biology too Peter Kelly as recipient of the Le Souëf Award. Peter responded with thanks to the Society and a brief history of the contribution of Zoo and Mary Le Souëf to the encouragement of entomologists, both beginners and experienced.

Exhibits:

1. D. Stewart. Photograph of the night clustering of wasps

2. P. Carwardine. Specimens of click beetle larva and beetle pupae (possibly also clerids).

Next Meeting: 10 December - Member's Night.

The meeting closed at 9-15 pm.

COUNCIL MEETING, 19 NOVEMBER 1993

No council meeting was held due to insufficient number of councillors available to form a quorum.

THE BUTTERFLIES OF MOA ISLAND, TORRES STRAIT.

Peter S. Valentine and Stephen J. Johnson
James Cook University, Townsville Q4811 and
PO Box 1085, Townsville, Q4810.

Introduction

Moa Island is part of the western chain of Torres Strait islands, to the north of Thursday Island. The butterfly fauna appear to be little studied. Most observations in the literature refer to records from Elgner's field work in the first decade of this century (Moulds, 1977). Unfortunately Elgner did not publish any accounts of his Torres Straits field collections. One more recent butterfly observer was Victorian author and artist Charles McCubbin who spent a brief period on Moa Island in June 1968 (pers. comm.). In his book on Australian butterflies McCubbin notes the presence of *Delias aruna* in thick forest near the summit of Mt Augustus (1971:124). The purpose of this paper is to present a first list of butterflies from Moa Island using observations from a field trip to Moa Island in April 1993 with additional records from the literature.

Moa Island Description

Moa Island (also known as Banks Island) is about 160 km^2 in area and has an elevation range from sea level to 374 metres (Banks Peak). Most of the island is relatively flat draining from the east to the west through an extensive network of streamlines. The map of Moa Island (Figure 1), drawn from aerial photographs and other sources, indicates the main features. One major area of high country occurs in the north of the island, several kilometres NNW of St Pauls village, where Banks Peak, Mt Augustus and associated ridges dominate the island topography. To the southwest of the island, north of Kubin village, a much smaller series of low hills support a limited area of closed forest. Apart from occasional pockets of wet forest, much of Moa Island has open woodland dominated by eucalypts and melaleucas. There are ant plants present in some patches of melaleuca swamps and several extensive areas of mangroves occur along the western and southern coasts. In the north, streams drain from the steep slopes of the Banks Peak range and there is riparian forest along the larger streams. In places along the main stream between Banks Peak and St Pauls village there are several large mango trees. Small patches of cultivation (papayas and bananas) occur occasionally through this area. A track connects the area with St Pauls. The northern ranges are cloaked in rainforest of variable density; in some areas the canopy is wind-sheared and steep rocky slopes are associated with reduced biodiversity. An old mine site is part way up the Mt Augustus ridge and a communications tower is located on the highest point of the Banks Peak ridge, some 200 metres upslope from a helipad.

An abandoned airstrip is present south of the main range with the new (active) airstrip located adjacent to the village of Kubin. A guest house is available at Kubin (the main village and Council office) and another at St Pauls. On the west coast an old abandoned village (Poid) remains as ruins, including the site of a former Japanese pearl oyster industry and a stone church. In this area there are wide stone-lined avenues and the remains of stone drainage channels. The grasslands are pockmarked with patches of vine thicket and in other places mangroves give way to some coastal vine thickets. This village faces the narrow channel

separating Moa island from Badu. A 4 wheel bike track connects to Kubin. There is a dirt road from Kubin to St Pauls with a side track connecting the abandoned air strip and the old mine.

Field Observations and Notes

The following list of species recorded at Moa Island includes records made by us during the period 2 April 1993 to 7 April 1993. Sites collected include Banks Peak, between Banks Peak range and St Pauls, the old village of Poid, and near Kubin settlement. A total of 71 species were recorded by us in the 5 days we spent on the island. A further 34 species have been recorded in literature of which at least one is judged incorrect (*H. malindeva*). The combined listing of some 104 species reflects the ecological diversity of Moa Island and the relatively undisturbed environments. The mountain ranges in the north appear to have a relatively intact and extensive rainforest area with such species as *Delias aruna* and most papilionids quite common.

Species names in **bold typeface** were recorded by us and those underlined appear to be the first records of the species from Moa Island. For those species not recorded by us the source for their presence on Moa Island is noted. The notation *C&W 1981* refers to Common and Waterhouse (1981), while *D&D 1991* refers to Dunn and Dunn (1991).

Discussion

In general the butterfly fauna of Moa Island appears rich and interesting. It is clear that some species are more likely to be present in the monsoon period (e.g. *Appias albina*), and it should also be noted that 1993 was a weak monsoon with lower than normal rainfall and an early finish. These factors may help account for some missing species from our field collections. The relatively poor diversity encountered on Banks Peak is also likely to be a reflection of seasonal conditions and further studies at this location could be fruitful. The following notes provide comments on some of the more interesting observations.

Hesperiidae: Larvae of *Tagiades japetus janetta* were common and adults were of the typical form; *Hesperilla sexguttata* larvae and adults were also present and adult males were sometimes devoid of markings. The *Borbo impar* appeared similar to specimens taken in the Northern Territory as indicated by Common and Waterhouse (1981). *Pelopidas lyelli* were widespread.

The literature record of *Neohesperilla xiphiphora* was confirmed from inspection of a specimen in the Australian Museum collected by Elgner on 22.ii.1910 [AM KL08233]. However, it is our opinion that the record of *Hesperilla malindeva* from Moa Island is incorrect. The record is based on a single specimen labelled "Banks Is. i.1910, A.S. Meek" located with the type series of *H. malindeva* in the Lower collection in the South Australian Museum. It is mounted on a similar pin and is identical to the two males labelled "Herberton. i. 1910, F.P. Dodd". It was most likely taken by Dodd at Herberton and not labelled, as was Dodd's custom, and sent to Meek probably when the latter was on Moa Island. Meek presumably gave the specimen the location at which he received it, a practice not unknown at the time. On the mainland *H. malindeva* is known only as far north as Herberton and Kuranda, over 700 km south of Moa Island.

Papilionidae: On Banks Peak there were many species of papilionids including *Protographium leosthenes* and *Graphium macfarlanei*. The *G. eurypylus* is similar to normal mainland specimens.

Pieridae: There were several *Delias aruna* flying along the high parts of Banks Peak ridge. Hilltopping *Appias paulina* were common in company with *Cepora perimale*. The specimen listed as *Elodina angulipennis* , also from Banks Peak, should now be known as *E. queenslandica* (De Baar and Hancock, 1993).

Nymphalidae: Banks Peak had several nymphalid species including *Tellervo zoilus* which conformed with specimens taken from Iron Range and Lockerbie. *Junonia orithya* were common and larvae were present, feeding on flowers and leaves of plantains during daylight.

Lycaenidae: A single *Catochrysops amasea* was taken on Banks Peak. *Hypochrysops narcissus* was relatively common at forest edge locations both near Kubin and in the north. Several male and female *Petrelaea tombugensis* were feeding on the flowers of *Terminalia catappa* at a beach near the old village of Poid. Larvae of *Hypochrysops apelles* were found feeding on the leaves of an *Alphitonia excelsa* shrub at Kubin.
Note that *P. tombugensis* occurs in Australia, not *P. dana* (see Parsons 1991).

References:

Common, I.F.B. and Waterhouse, D.F. 1981 *Butterflies of Australia*, Angus and Robertson, Sydney.

Dunn, K.L. and Dunn, L.E. 1991 *Review of Australian Butterflies: distribution, life history and taxonomy*, Parts 1-4, Dunn&Dunn, Melbourne.

De Baar, M. and Hancock, D.L. 1993 The Australian Species of *Elodina* C.&R. Felder (Lepidoptera: Pieridae) *Australian Entomologist* 20:25-43

McCubbin, C. 1971 *Australian Butterflies*, Thomas Nelson, Melbourne.

Moulds, M.S. 1977 *Bibliography of the Australian Butterflies*, Aust. Ent. Press, Sydney.

Parsons, M. 1991 *Butterflies of the Bulolo-Wau Valley*, Bishop Museum Press, Honolulu.

HESPERIIDAE

Allora doleschallii doleschallii	C&W 1981
Hasora hurama hurama	C&W 1981
Hasora chromus chromus	
Badamia exclamationis	
Tagiades japetus janetta	
Trapezites heteromacula	
Neohesperilla xiphiphora	C&W 1981 *
Neohesperilla crocea	C&W 1981
Hesperilla sexguttata	
Hesperilla malindeva (delete)	C&W 1981 *
Notocrypta waigensis proserpina	
Taractrocera anisomorpha	
Taractrocera ina	
Ocybadistes ardea heterobathra	
Ocybadistes hypomeloma vaga	
Suniana sunias rectivitta	
Telicota colon argeus	
Telicota augias krefftii	
Cephrenes augiades sperthias	
Sabera caesina albifascia	
Borbo cinnara	
Borbo impar lavinia	
Pelopidas lyelli	

PAPILIONIDAE

Protographium leosthenes leosthenes	
Graphium sarpedon choredon	
Graphium eurypylus	
Graphium macfarlanei macfarlanei	
Graphium agamemnon ligatum	
Papilio aegeus aegeus	
Papilio fuscus indicatus	
Cressida cressida cressida	
Atrophaneura polydorus q.	
Troides priamus poseidon	

PIERIDAE

Catopsilia pomona pomona	
Eurema brigitta australis	
Eurema lacta lineata	
Eurema hecabe phoebus	
Elodina perdita perdita	C&W 1981
Elodina angulipennis	
Delias mysis onca	
Delias aruna inferna	
Anaphaeis java teutonia	C&W 1981
Cepora perimale scyllara	
Appias albina albina	C&W 1981
Appias paulina ega	

NYMPHALIDAE

Danaus plexippus plexippus	
Danaus chrysippus petilia	
Danaus affinis affinis	
Euploea sylvester sylvester	
Euploea core corinna	
Tellervo zoilus gelo	
Melanitis leda bankia	
Mycalesis sirius sirius	
Mycalesis terminus terminus	
Mycalesis perseus perseus	
Orsotriaena medus moira	C&W 1981
Hypocysta adiante adiante	
Xois arctos (Ypthima arctous)	
Phaedyma shepherdi latifasciata	
Pantoporia consimilis consimilis	
Yoma sabina parva	
Vindula arsinoe ada	C&W 1981
Vagrans egista propinqua	C&W 1981
Doleschallia bisaltide australis	
Hypolimnas bolina nerina	
Hypolimnas alimena lamina	
Junonia villida	
Junonia orithya	
Junonia hedonia zelima	
Cupha prosope prosope	
Acraea andromacha andromacha	C&W 1981

LIBYTHEIDAE

Libythea geoffroy nicevillei	C&W 1981

* see notes

LYCAENIDAE

Liphyra brassolis major	*C&W 1981*
Hypochrysops apelles apelles	
Hypochrysops narcissus sabirius	
Arhopala wildei wildei	*C&W 1981*
Arhopala madytus	
Arhopala centaurus centaurus	
Arhopala micale amytus	
Ogyris zosine typhon	*C&W 1981*
Hypolycaena danis turneri	*D&D 1991*
Hypolycaena phorbas lingura	
Rapala varuna simsoni	
Deudorix epirus agimar	*D&D 1991*
Bindahara phocides yurgama	*D&D 1991*
Anthene seltuttus affinis	
Anthene lycaenoides godeffroyi	
Candalides erinus erinus	
Nacaduba kurava parma	*C&W 1981*
Prosotas dubiosa dubiosa	*C&W 1981*
Prosotas nora auletes	*D&D 1991*
Petrelaea tombugensis	
Theclinesthes miskini arnoldi	
Danis hymetus salamandri	
Danis cyanea erinea	
Jamides phaseli	
Lampides boeticus	
Catochrysops panormus platissa	
Catochrysops amasea amasea	
Zizina labradus labdalon	
Famegana alsulus alsulus	
Euchrysops cnejus cnidus	
Caiopyrops ancyra mysia	*C&W 1981*
Neopithecops lucifer heria	*D&D 1991*

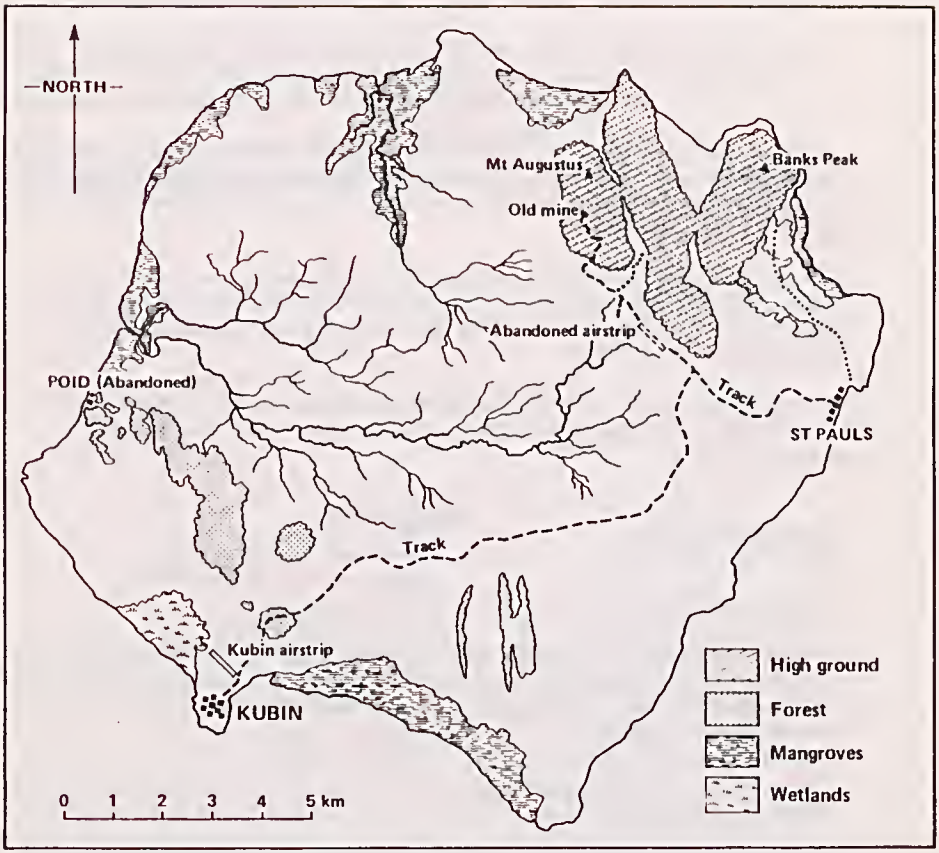

Fig. 1 Moa Island, Torres Strait: interpretation from uncorrected aerial photograph CAB388 1.8.1971, plus field observations.

LEPIDOPTERA (BUTTERFLIES) NATURALLY BREEDING IN MALVERN

Peter Carwardine
2A Victoria Road
Malvern Victoria 3144

The following list shows butterflies that have bred naturally at some time during the years 1972 to 1988 in my garden at Malvern, and inner suburb 9 km east of the Melbourne GPO and 6 km from Port Phillip Bay.

Other than providing food plants for larvae and adults, no deliberate steps have been taken to encourage breeding. The Garden consists of a square area at the front of the house of approximately 100 m² with a similar area at the back. The garden is 44 meters above sea level and the Grid Reference is YN52/22.

The surrounding suburbs are generally flat and there are no hills for several kilometres. There is a large, mostly open, park within a kilometre, but there are no areas of natural vegetation for several kilometres.

Dispar compacta (Butler)	Grasses
Ocybadistes walkeri (Heron)	*Imperata cylindrica* (Blade Grass)
	Ehrharta erecta (Panic Veldt Grass)
* *Papilio anactus* (Macleay)	*Citrus limonia* (Lemon)
Pieris rapae rapae (Linnaeus)	*Raphanus sativus* (Radish)
# *Heteronympha merope merope* (Fabricus)	Unmown lawn grass.
Vanessa kershawi (McCoy)	*Helichrysum bracteatum* (Straw Flower)
Vanessa itea (Fabricus)	*Urtica urens* (small Nettle)
Lampides boeticus (Linnaeus)	*Lupinus sp.* (Lupins)
* *Zizina labradus labradus* (Godart)	*Trifolium sp.* (clover)

* bred on adjacent property.

Heteronympha merope laid eggs on Panic Veldt grass while in captivity, but it may not do so naturally. The larvae developed on this foodplant.

The list contains no species unusual for the area, on the other hand it has all species, including some migrant butterflies that could be expected.

Possibly the only other two that could be attracted would be *Jalmenus evagoras* and *Ogyris abrota*, but I do not have Silver Wattle or Mistletoe growing and the nearest known colonies are 10 km distant.

Although I have Swan Plants and a Lemon Tree, no butterflies have ever bred on them.

Other larval foodplants are grown to feed anything that I might bring home from other localities. A Mistletoe, *Muellerina eucalyptoides*, was grown for several years, but died. Buddleia, Lantana and Michaelmas Daisy are grown as attractants for adults.

The average mean daily maximum temperature of Melbourne 1960 - 1992 was 19.8°C while the average mean daily minimum was 11°C. The average yearly rainfall at my home 1962 - 1990 was 757 mm.

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URGENT

The south Australian Museum is using electrophoresis techniques to examine the various subspecies of the lycaenid butterfly *Ogyris genoveva*. Four or five larvae of the subspecies *araxes* are required to further these studies.

Any person willing to provide these larvae should contact Bob Fisher by letter at the South Australian Museum, North Terrace, Adelaide 5000, or phone him after hours at (08) 276 2911.

Larvae at any instar are suitable; younger larvae can be reared to a more mature size without difficulty.

SCIENCE TALENT SEARCH 1993

Tim New

The 42nd Science Talent Search, organised by the Science Teacher's Association of Victoria, culminated in the presentation day held at La Trobe University on 26 October. The Society had contributed funds from the 'Junior Encouragement Fund' for projects on insects, and the notes below refer to the two entries which were awarded bursaries from us.

The first, gaining a 'Credit' grade in the Lower Primary Level for Experimental Research, was an impressive project on Harlequin Bugs by Asher Pears (Malvern Community School). The project assessor had reported that the project was a good idea and undertaken carefully and logically. Asher tried to find out what the bugs look like, what and how they eat, when they are inactive and active in relation to temperature, and the size of a colony in an old pine stump, and tested and observed them on various plants in jars. His report contains his observations and a number of sketches of the bugs. This very worthy project received $20 from the ESV.

The second report, gaining a 'minor' award in the 'Intermediate category', was Premala Thiagarajan (PLC), whose project on 'Circadian Rhythms' was graded as 'an exceptional piece of work of a very high standard'. Unfortunately, it seemed to have little to do with insects, and dealt with assessing the daily performance levels' of year 9 students at PLC! However, our bursary of $30 has undoubtedly gone to a very promising young Scientist!

I was clearly impressed at the very high quality of posters and photographs entered. One main poster category was on 'cycles', and a number of students had produced elaborate, accurate and informative posters of insect life-cycles - I noted 9 on butterflies, 1 of a silkworm, 2 on bees, 1 ant, 2 dragonflies, and a grasshopper. The photographs included a splendid series on 'Animals that live in my woodheap' and one on 'leaf curl spiders'. These seem to be areas well worth encouragement from the Society.

A MIGRATION OF *LAMPIDES BOETICUS* (LINNAEUS), THE PEA-BLUE BUTTERFLY. (LEPIDOPTERA: LYCAENIDAE).

W.N.B. Quick

This little butterfly, which is almost cosmopolitan, is a familiar sight in Melbourne's suburban gardens throughout the warmer months, but is much less frequently noticed in the forested areas to the east of the state. Near Mt Cannibal, at Garfield North, one or two might be seen each season.

On September 30 of this year, several were noticed briefly visiting a flowering *Westringia*, together with *Pieris* (=*Artogeia*) *rapae* and *Delias harpalyce* (both Pieridae).

The following morning *L. boeticus* were more numerous, one or two passing through a 30-meter line-of-sight every few minutes, the flight pattern clearly indicating that a migration to the south-east was passing through. Some few of these paused briefly at the *Westringia*, but most did not.

The flight dwindled over the midday period, but resumed during the afternoon. Overnight there was a heavy fall of rain, but the flight, still in the same direction, resumed the following morning (October 2) as soon as the sun appeared. By early afternoon it had ceased, and no further specimens have been noticed.

The insects were predominantly females, and most appeared to be in fresh to very fresh condition. This butterfly is a known migrant in Europe, and a migration has been observed at Mt Tamborine, (Q.) in 1974 (Common and Waterhouse, 1981). There appears to be no previously-documented migrations which have been observed in Victoria. It would be interesting to learn if an abnormal number of specimens are made in Tasmania, where the species is normally rare.

SOME DISTRIBUTIONAL RECORDS AND NATURAL HISTORY NOTES ON BUTTERFLIES FROM WESTERN AUSTRALIA

Andrew A.E. Williams[1], Matthew R. Williams[2], R. W. Hay[3] and A. G. Tomlinson[4].

[1] Department of Conservation and Land Management, W.A. Wildlife Research Centre, P.O.Box 51, Wanneroo, W.A. 6065

[2] Department of Conservation and Land Management, 50 Hayman Road, Como, W.A. 6152

[3] 8 Klem Avenue, Manning, W.A. 6152

[4] P. O. Box 242, Exmouth, W.A. 6707

The following butterflies are recorded from localities in Western Australia. Voucher specimens are lodged in the Insect Collection of the Department of Conservation and Land Management and in our private collections.

HESPERIIDAE

Trapezites argenteoornatus argenteoornatus (Hewitson)

A single specimen was collected in open *Eucalyptus loxophleba* and *Acacia acuminata* woodland at Mingenew (29° 12'S 115° 26'E), on 11 October 1993. Specimens were also taken at Watheroo National Park (30° 15'S 115° 52'E) on 20 October 1993. All previous records of this skipper are from coastal localities. At Mingenew a known foodplant, *Acanthocarpus preissii* Lehm., was present. At Watheroo National Park the skippers were flying around and settling on *Acanthocarpus canaliculatus* A.S.George, and this is probably the foodplant. Near Perth larvae of the closely related *Trapezites sciron sciron* Waterhouse and Lyell are known to feed on *A. canaliculatus* (Williams *et al.* 1992).

Anisynta sphenosema (Meyrick and Lower)

Common and Waterhouse (1981) record that in Perth the larvae of *A. sphenosema* feed on grasses. At Wanneroo, 25 km north of Perth, the larvae of this species commonly feed on perennial veldt grass *Ehrharta calycina* Smith and weeping grass *Microlaena stipoides* (Labill) R.Br., and less frequently on annual veldt grass *E. longiflora* Smith. Both *Ehrharta* species are introduced.

Anisynta albovenata fuscata Parsons

The record of this skipper from Wubin (Dunn and Dunn 1991) refers to a specimen collected by one of us (MRW) and was, in fact, from near Whitewells, 46 km north-east of Wubin (29° 50'S 116° 57'E). Specimens have also been collected 15 km north of Southern Cross (31° 05'S 119° 19'E) in late September and early October.

Hesperilla donnysa albina Waterhouse

Populations exist at Wattening Nature Reserve (31° 19'S 116° 34'E) in the Shire of Toodyay, 100 km north-east of Perth, and at Watheroo National Park alongside the Coonderoo River (30° 19'S 115° 58'E). At both sites larvae and pupae were found on *Gahnia trifida* Labill.

Hesperilla chrysotricha chrysotricha (Meyrick and Lower)

We have found this species where the foodplant *Gahnia decomposita* (R.Br.) Benth. grows along watercourses and seepages on the Darling Scarp to the east and south of Perth. It is very common at a number of sites including the area around Dwellingup (32° 43'S 116° 04'E) and the Morangup Nature Reserve (31° 40'S 116° 20'E), 15 km south-west of Toodyay. In the Stirling Range National Park 3 pupae of this skipper were collected from characteristic shelters on *Gahnia deusta* (F. Muell.) Benth. This record resolves earlier speculation (Williams 1990) on the likely foodplant of this species in the Stirling Range. In October 1993 a single male was taken at Watheroo National Park (30° 19'S 115° 48'E) in dry open Banksia dominated woodland 15 km away from the nearest known source of *Gahnia* foodplant.

Motasingha trimaculata occidentalis Moulds and Atkins

This skipper was only recently (Moulds and Atkins 1986) recognised as distinct from *M. dirphia* (Hewitson). At the northern Perth suburbs of Alexander Heights, Koondoola, Mirrabooka and Wanneroo, eggs, larvae and pupae have been located on *Phlebocarya ciliata* R.Br. (family Haemodoraceae). Previously, skippers of this genus have only been recorded on plants of the family Cyperaceae (Common and Waterhouse 1981).
Captive larvae will consume foliage of the Red and Green Kangaroo Paw *Anigozanthos manglesii* D.Don., but attempts to rear larvae on this plant have been unsuccessful.

Antipodia dactyliota anoces (Waterhouse)

Four specimens were collected at Buntine Nature Reserve (30° 00'S 116° 38'E) 10 km north of Wubin in September 1991 and September 1992. A single specimen was collected at Dryandra Forest (32° 47'S 116° 55'E), 140 km south-east of Perth, in November 1992.

Mesodina cyanophracta Lower

In the Perth area the foodplant is *Patersonia occidentalis* R.Br., which grows commonly in the Banksia and Jarrah dominated woodlands of the Swan Coastal Plain. Adult *M. cyanophracta* are most common in November. Larvae collected at Watheroo National Park (30° 15'S 115° 52'E) in October 1993 were found on *P. occidentalis* and *P.* aff. *occidentalis*. Around Perth a very high proportion of larvae are parasitised by an Ichneumonid wasp. However, at Watheroo National Park and Moore River National Park north of Perth, *M. cyanophracta* larvae are seldom parasitised in this way.

Proeidosa polysema (Lower)

In September 1989 *P. polysema* was collected at Cape Range National Park (22° 06'S 114° 00'E), on rocky ridges 21 km south-south-west of Exmouth. In April 1990 a further specimen was taken on red sand dunes on Hope Island, Exmouth Gulf (22° 10'S 114° 28'E), where the vegetation is dominated by a *Triodia pungens* grassland.

Croitana croites (Hewitson)

Many specimens were collected or observed in late September 1990 near Whitewells, 46 km north-east of Wubin (29° 50'S 116° 57'E), where they were attracted to small flowering annuals in open *Eucalyptus loxophleba* and *Acacia acuminata* woodland. Others were collected in similar habitat at Mingenew (29° 12'S 115° 26'E) in October 1993.

Cephrenes trichopepla (Lower)

A single specimen was collected at Warwick in November 1992, 12 km south of the original record for this species in Perth (Williams 1991).

PIERIDAE

Delias aganippe (Donovan)

In Western Australia *D. aganippe* is recorded from Bremer Bay north to Carnarvon (Common and Waterhouse 1981). One of us (AGT) collected two freshly emerged specimens from north of Learmonth (22° 10'S 114° 04'E) in August 1992, and observed two others at the same locality in late September 1993. These specimens extend the known Western Australian distribution some 300 km further north.

Eurema hecabe phoebus (Butler)

Common and Waterhouse (1981) record *E. h. phoebus* as occuring accross north-western Australia as far south as Geraldton. Dunn and Dunn (1991) show no distribution points for central Western Australia. We have a specimen from Lake Gregory (119° 55'S 25° 37'E) taken in August 1993.

Eurema smilax (Donovan)

Although *E. smilax* is widespread in Australia, Dunn and Dunn (1991) show relatively few localities for Western Australia. The species was present at Mount Augustus (24° 20'S 116° 51'E) in September 1991.

NYMPHALIDAE

Danaus chrysippus petilia (Stoll)

D. c. petilia was recorded at Mount Augustus (24° 20'S 116° 51'E) in September 1991, and at Lake Gruszka in the Gibson Desert Nature Reserve (25° 20'S 125° 34'E), in September 1992.

Geitoneura minyas (Waterhouse and Lyell)

Adults were observed and collected in mid September 1991 alongside the Great Northern Highway 50 km north-north-east of Paynes Find (28° 50'S 117° 49'E). In these semi-arid Acacia woodlands they were seen in moist hollows where grasses were growing after heavy winter rainfall. In October 1993 the species was abundant around Paynes Find (29° 16'S 117° 41'E).

Hypolimnas bolina nerina (Fabricius)

A single freshly emerged female in the Department of Conservation and Land Management Insect Collection was taken by Tony Tapper at Mount Augustus National Park (24° 20'S 116° 51'E) in May 1991. Specimens have also been caught and observed at Carnarvon (24° 53'S 113° 40'E) in August and September. Individuals are occasionally observed at Exmouth. These may have been blown across Exmouth Gulf from Onslow.

Vanessa cardui (Linnaeus)

Further specimens have been observed (Powell 1992a) or collected at Bunbury from October to January. However no specimens have been recorded from Fremantle since 1981.

Vanessa itea (Fabricius)

Several specimens have recently been collected near Learmonth (22° 10'S 114° 04'E), where adults are on the wing from June to August. The previous northern record of this species is 10 km north-east of Geraldton (Common and Waterhouse 1981), some 720 km south of this locality. In the south-west the larvae feed on introduced nettles *Urtica urens* L. (Urticaceae), and have recently been recorded on the native *Parietaria debilis* G.Forster (Powell 1992b). The foodplant at Learmonth is probably *P. debilis*, though the closely related *P. cardiostegia* Greuter also occurs in the region (Greg Keighery, Department of Conservation and Land Management, pers. comm.).

Acraea andromacha andromacha (Fabricius)

Two fresh specimens were collected near Learmonth (22° 10'S 114° 04'E) in late September 1992, others being observed at the same locality in October 1992. In March 1993 approximately 25 worn individuals were seen on sheltered north and north-east facing slopes at Vlaming Head, 10 km north of Exmouth.

LYCAENIDAE

Hypochrysops halyaetus Hewitson

H. halyaetus was recorded near the north-western corner of Watheroo National Park (30° 10'S 115° 45'E) in October 1993.

Hypochrysops ignitus olliffi Miskin

In south-western Western Australia *H. i. olliffi* has been recorded from coastal sites as far north as Perth (Dunn and Dunn 1991), and inland from the Stirling Range National Park (Williams *et al.* 1992). Specimens collected at Watheroo National Park (30° 19'S 115° 50'E) in October and November 1993, and tentatively assigned to this subspecies, extend the known distribution of *H. i. olliffi* 180 km further north. Further work is being undertaken to determine the subspecific status of the Watheroo population.

Ogyris oroetes apiculata Quick

A single pupa was collected under the bark of a *Eucalyptus* sp. bearing the mistletoe *Amyema miquelii* (Lehm. ex Miq.) Tieghem at Duladgin Nature Reserve (31° 10'S 119° 41'E), 15 km north of Yellowdine, on 24 September 1991.

Jalmenus ictilus Hewitson

A colony of this lycaenid occurs at Pelham Reserve, Toodyay (31° 33'S 116° 27'E), where the habitat is a mixed *Eucalyptus loxophleba* and *Acacia acuminata* open woodland. The larvae feed on *A. acuminata* and are attended by large numbers of *Iridomyrmex* sp. ants. Adults are on the wing during October and November. Single specimens have also been obtained from Wambyn Nature Reserve (31° 54'S 116° 37'E), 15 km west of York, and from Mingenew (29° 12'S 115° 26'E). At Dryandra State Forest, the larval foodplant is *Gastrolobium microcarpum* Meissner (A.J. Oliver, pers. comm.). Specimens from this population are consistently smaller than specimens from Toodyay, Mingenew and Wambyn Nature Reserve, and from populations around Perth.

Candalides cyprotus cyprotus (Olliff)

Single hill-topping males were collected at Duladgin Nature Reserve (31° 10'S 119° 41'E), 15 km north of Yellowdine, on 24 September 1991, and from 15 km north of Southern Cross (31° 05'S 119° 19'E) on 9 October 1992.

Candalides heathi heathi (Cox)

A specimen from Hope Island, Exmouth Gulf (22° 10'S 114° 28'E), was observed ovipositing on *Myoporum acuminatum* R.Br. in August 1989. We have also recorded *C. h. heathi* from 111 km south of Exmouth (22° 53'S 113° 57'E).

Candalides hyacinthinus hyacinthinus (Semper)

Specimens currently ascribed to this subspecies (E.D. Edwards, pers. comm.; Edwards and Kerr 1978) have been collected at Yalgorup National Park (32° 50'S 115° 39'E) about 50 km north of Bunbury, and at Manjedal (32° 17'S 116° 03'E), 40 km south-south-east of Perth, from November to January.

Candalides hyacinthinus simplex (Tepper)

Fairly common in the Cape Range National Park south of Exmouth. Specimens have been taken on the ranges and the coastal plain in June, August and September. A single specimen was collected 60 km east of Hyden (32° 25'S 119° 30'E), in February 1993.

Neolucia agricola occidens Waterhouse and Lyell

Specimens were collected at Leeman (29° 58'S 114° 59'E) and 13 km south of Coorow (29° 58'S 116° 06'E) in September 1990, and at Whitewells (29° 35'S 116° 58'E) in October 1993. At Swan View, Perth, one of the larval foodplants is *Jacksonia sternbergiana* Huegel. A pupa found inside a fallen hollow branch at the base of a *J. sternbergiana* tree was attended by small black ants.

Theclinesthes miskini miskini (T.P.Lucas)

We have found this to be a very common lycaenid around North West Cape, but much less common inland and in the south west. We have inland records from the Gascoyne River, 3.7 km south-east of Landor (25° 09'S 116° 55'E), from Errabiddy (25° 28'S 117° 08'E), 185 km north-west of Meekatharra, from Beanthiny Hill (29° 35'S 117° 16'E), 28 km east of Whitewells, and from Watheroo National Park (30° 15'S 115° 52'E), 90 km east of Jurien. A single specimen was taken at Pelham Reserve, Toodyay (31° 33'S 116° 27'E) in October 1992.

Theclinesthes serpentata serpentata (Herrich-Schaffer)

The range of this species is recorded as mainland Australia south of a line drawn from Mackay, Queensland to Roebourne, Western Australia (Common and Waterhouse 1981). Dunn and Dunn (1991) show few distribution points for inland Western Australia. We have records of *T. s. serpentata* from 62 km south of Mt. Augustus (24° 49'S 116° 55'E), from Mingenew (29° 12'S 115° 26'E), and from near Whitewells (29° 50'S 116° 57'E) 46 km north-east of Wubin. Specimens have also been collected at Rottnest Island.

Lampides boeticus (Linnaeus)

L. boeticus was recorded at Lake Gruszka (25° 20'S 125° 34'E) in the Gibson Desert Nature Reserve in September 1992.

Famegana alsulus alsulus (Herrich-Schaffer)

In November 1992 this species was fairly common in the Cape Range National Park at Milyering (22° 01'S 113° 56'E), 40 km south-south-west of North West Cape.

Acknowledgements

We thank Phil Fuller, Andrew Burbidge and Grant Pearson of the Department of Conservation and Land Management for material collected at Lake Gruszka and Lake Gregory. Greg Keighery identified specimens of *Acanthocarpus canaliculatus* from Watheroo National Park.

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ON THE GRAPEVINE

David and Joyce Holmes have had the pleasure of visits from Bernard and Lucilla D'Abrera, who on their first visit brought with them Mick Day, from the British Museum. He is a world authority on wasps. Having most of Bernard's books on butterflies, it was very interesting indeed to meet the author, and to learn how painstaking is the task that he endures in the production of this very important series, that are fast becoming collectors items, and are increasing in value every year.

Daniel and Susan Dobrosak are the proud parents of Cale Nathaniel Dobrosak, weighing in at 3.935 kg (8 lb 10 oz), born on Thursday 28 October 1993.

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RECENT ARTICLES OF INTEREST

Compiled by Ian Endersby

Personal alarm flushes out aphids. *New Scientist* 2 Oct. 1993. P 14. Use of an aphid alarm pheromone drives aphids from the heart of a lettuce, where they are difficult to control, to the outer leaves. This results in pesticide applications of one-tenth of the recommended dose being sufficient for control.

Asymmetry and damselfly mating success. *Ecological Entomology* 18: 198-202 (1993). Males of *Coenagrion puella* with more symmetrical wings enjoyed higher lifetime mating success. Symmetry apparently is a good indicator of genetic quality.

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The Society welcomes contributions of articles, papers or notes pertaining to any aspect of entomology for publication in this Bulletin. Contributions are not restricted to members but are invited from all who have an interest. Material submitted should be responsible and original. Statements and opinions expressed are the responsibility of the respective authors and do not necessarily reflect the policies of the Society.

Contributions may be typed on A4 paper or *preferably* sent to the Hon. editor on an IBM formatted disk in *Microsoft Word for Windows, WordPerfect* or *text* with an enclosed hard copy .

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DIARY OF COMING EVENTS

10 December - Members Night
Members to bring exhibits, slides etc. for discussion

18 February-General Meeting

Scientific names contained in this document are *not* intended for permanent scientific record, and are not published for the purposes of nomenclature within the meaning of the *International Code of Zoological Nomenclature*, Article 8(b). Contributions are not refereed, and authors alone are responsible for the views expressed.

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